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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jerry Prismantas

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EXAMINER

MOORE JR, MICHAEL J

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,621

Applicant(s)

PRISMANTAS ET AL.

Examiner

Michael J. Moore, Jr.

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-29,31-33 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-11,20-29,31,36 and 37 is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☒ Claim(s) 32,33 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/27/2005 has been entered.

Claim Objections

2. Claims **33 and 35** are objected to because of the following informalities:

Regarding claim **33**, on line 1, the word "system" should be "method" in order to correspond to claim **12**.

Regarding claim **35**, on line 1, the word "system" should be "method" in order to correspond to claim **20**.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims **12-14, 18, and 19** are rejected under 35 U.S.C. 102(b) as being anticipated by Arnstein et al. (U.S. 5,889,821) ("Arnstein"). Arnstein teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim **12**, "detecting interference using a filter" and "sweeping the filter across an RF band of interest" is anticipated by level sensor 623 (filter) of Figure 6B that receives a passband signal (RF band of interest) from diplexer 622 and detects the presence or absence of a radar signal (interference) as spoken of on column 8, lines 48-60.

"Calculating characteristics of RF interference within the RF band of interest to arrive at an interference profile of periodicity and discrete durations of the interference" is anticipated by the detection of a radar in-band signal (interference profile) by level sensor 623 as spoken of on column 8, lines 52-60 and shown in Figures 3,4, and 5.

Lastly, "adjusting time sequences of desired RF transmissions to accommodate the interference profile" is anticipated by the detection of a radar signal by level sensor 623 and the resulting blanking (adjusting) of the received signal for the duration of a radar pulse as spoken of on column 8, lines 61-64.

Regarding claim **13**, "wherein the filter is a narrow band filter" is anticipated by level sensor 623 (narrow band filter) of Figure 6B that receives a passband signal (RF band of interest) from diplexer 622 and detects the presence or absence of a radar signal (interference) as spoken of on column 8, lines 48-60.

Regarding claim **14**, "wherein the desired RF transmissions occur in sequential repetitive time slots" is anticipated by the channel symbols shown in Figure 4.

Lastly, "wherein the adjusting step includes the step of eliminating at least one of the time slots for the duration of the interference" is anticipated by the detection of a radar signal by level sensor 623 and the resulting blanking (eliminating) of the received signal for the duration of a radar pulse as spoken of on column 8, lines 61-64.

Regarding claim **18**, "wherein the RF interference is repetitive RF interference" is anticipated by the repetitive radar signal (interference) shown in Figures 4 and 5.

Regarding claim **19**, "wherein the repetitive RF interference is a radar signal" is anticipated by the repetitive radar signal (interference) shown in Figures 4 and 5.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claim **15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnstein et al. (U.S. 5,889,821) ("Arnstein") in view of Carlson (U.S. 6,374,082).

Regarding claim **15**, Arnstein teaches the method of claim **14**. While Arnstein teaches the blanking (prevention) of data reception during periods when a radar pulse is present, Arnstein does not teach the rescheduling of the RF transmissions.

However, Carlson teaches the communication of data during quiescent periods of RF periodic noise as spoken of on column 3, lines 37-47.

These references are considered to be analogous references in that they are both concerned with improving the quality of data transmission and reception in the presence of periodic interference.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art given these references to combine the teachings of Arnstein with the scheduling teachings of Carlson in order to reduce the effects of interference on RF transmissions.

8. Claims **16 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnstein et al. (U.S. 5,889,821) ("Arnstein") in view of Carlson (U.S. 6,374,082) and in further view of Blair et al. (U.S. 2002/0173271) ("Blair").

Regarding claim **16**, Arnstein in view of Carlson teaches the method of claim **15**. Arnstein in view of Carlson does not teach the changing of a modulation to accommodate data in remaining ones of the time slots.

However, Blair teaches the selection of a different modulation scheme to accommodate data on page 6, paragraph 53 as well as step 580 of Figure 5.

Art Unit: 2666

At the time of the invention, it would have been obvious to someone of ordinary skill in the art given these references to combine the teachings of Arnstein in view of Carlson with the modulation teachings of Blair in order to provide a more robust modulation scheme for data transmission as spoken of on page 6, paragraph 53 of Blair.

Regarding claim **17**, Arnstein in view of Carlson teaches the method of claim **15**. Arnstein in view of Carlson does not teach the adjusting of a code rate to accommodate remaining ones of the time slots.

However, Blair teaches the adjustment of a symbol rate to accommodate data on page 5, paragraph 51 as well as step 565 of Figure 5.

At the time of the invention, it would have been obvious to someone of ordinary skill in the art given these references to combine the teachings of Arnstein in view of Carlson with the symbol rate teachings of Blair in order to conserve bandwidth for data transmission as spoken of on page 5, paragraph 51 of Blair.

Allowable Subject Matter

9. Claims **1, 3-11, 20-29, 31, and 35-37** are allowable over the prior art of record.
10. Claims **32 and 33** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
11. The following is a statement of reasons for the indication of allowable subject matter:

Regarding *amended* claim **1**, *Carlson* (U.S. 6,374,082) teaches the detection of periodic RF interference and the scheduling of RF data transfer during intervals that avoid the interference.

The prior art of record does not teach means for determining the most efficient of: scheduling the RF data transfer during the intervals that avoid interference or transmitting RF data during the data transfer intervals and allowing forward error correction of a receiver to correct the errors of the data transfer.

Regarding claims **3-11, 31, and 36**, these claims are further limiting to claim **1** and are thus also allowable over the prior art of record.

Regarding *amended* claim **20**, *Arnstein et al.* (U.S. 5,889,821) teaches the detection of repetitive RF interference using an auxiliary antenna coupled to a level sensor.

The prior art of record does not teach determining the most efficient of: adjusting a time sequence of desired RF transmissions to accommodate the interference profile, rescheduling transmissions to avoid the interference, and transmitting the RF data and resending the data sent during the interference.

Regarding claims **21-29, 35, and 37**, these claims are further limiting to claim **20** and are thus also allowable over the prior art of record.

Regarding *amended* claim **32**, *Arnstein et al.* (U.S. 5,889,821) teaches the method of claim **12**.

The prior art of record does not teach determining the most efficient of: adjusting time sequences of the desired RF transmissions to accommodate the interference

profile, allowing forward error correction of a receiver to correct errors in the RF data transfer, and resending the data sent during the interference.

Regarding claim **33**, this claim is further limiting to claim **32** and is thus also allowable over the prior art of record.

Response to Arguments

12. Applicant's arguments with respect to claims **12-19** have been considered but are moot in view of the new ground(s) of rejection provided above.

13. Applicant's arguments with respect to *amended* claims **1, 3-11, 20-29, 31-33, and 35** have been fully considered and are persuasive. The rejections of these claims have been withdrawn.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mansfield (U.S. 6,704,346) is another reference pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2666

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

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